100% Biomass Nature derived (No Petroleum) Cellulose base Biodegradable Resin Materials.

GS BP Cellulose

Recently, destroying ecology and environmental by plastic pollution is getting severe in the world and especially microplastic problem in the marine environment is becoming a devastating issue. It is predicted that the amount of plastic garbage may become more than that of fish in the world in near future. There is some scientific report that microplastic is already in our human body.

To solve this matter, various type of bio plastics are under development or are already in use. Some biodegradable resins are made of petroleum. In contrast, as biomass based biodegradable resin, PLA : Poly Lactic Acid, PHA : Poly Hydroxy Alkanoate, starch based resin are generally applied. normally, they can be made from food biomass such as grains, potatoes, sugar canes etc…However, when one considers about food shortage problem in the near future, non-edible biomass raw material is more ideal. Cellulose is the ideal material in this regard because it is the most abundant organic natural resource on this planet and they are non-edible. Some reports explain that over 70 billion tons of natural resource can be obtained if cellulose can be efficiently utilized. We suggest it is not necessary to cut down the forest and living trees. We can utilize waste wood such as thinned wood as cellulose resource, and that should be enough quantity. Furthermore, it can be suggested that price of cellulose based resin can be economically friendly.

Recently, researchers have been trying to make cellulose based resin by saccharification of cellulose with acid or enzymes. However, decomposition process and pre-treatment process are troublesome processes so that cost will be too expensive for real application.

In this regard, We have developed 100% Biomass nature derived (No Petroleum) cellulose base biodegradable resin materials. We try to persist to

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the idea of making biodegradable material with 100 % nature biomass based materials and as harmless as possible to the environment. No petroleum origin materials. This is the thermoplastic cellulose and very environmentally friendly material. It also has possibility to be economically friendly when large quantity is produced.

On top of that, we have nano cellulose composite technology with various type of resins and we already had confirmed the mechanical strength improvement with this cellulose based resin while keeping 100 % nature biomass composition because nano cellulose is also the natural material.

We will keep trying to improve resin properties such as mechanical strength, crystallinity, molding property, heat resistance etc…

Please consult with us anytime including technical detail.

Tensile strength : 42 - 54 MPa

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